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Atty. Dkt. No. 016782-0346

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Jorgen DENUL et al.

Title: SUBSTRATE COVERED WITH AN INTERMEDIATE COATING  
AND A HARD CARBON COATING

Appl. No.: Unassigned

Filing Date: 01/20/2006

Examiner: Unassigned

Art Unit: Unassigned

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the date of entry of the national stage as set forth in 37 CFR §1.491.

**RELEVANCE OF EACH DOCUMENT**

The relevance of non-English language document A7 is described in the present specification.

Documents A1, A2, A6 and A8-A10 listed on the attached PTO/SB/08 were cited as being relevant during a search of the corresponding International application. A copy of the International Search Report setting forth the portion of each reference considered relevant by the examiner is attached.

Documents A3-A5 and A6 belong to the same “patent family,” whereby the English language document may assist the PTO in understanding the content of the non-English language document.

Unless otherwise indicated, no English translation is readily available (not considering machine-generated translations that may be freely available online, to both the Applicant and the PTO) for each of the non-English language documents. However, a commercially available English language abstract is provided herewith, where indicated on the attached Form PTO/SB/08. Inasmuch as Applicants have endeavored to provide at least one item that complies with the requirement for a “concise explanation of relevance” for each of the non-English language documents, each of these documents has been submitted in compliance with the PTO requirements and should be considered by the Examiner (37 CFR §1.97, §1.98 and MPEP §609).

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

By 

Date January 20, 2006

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Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

Date Submitted: January 20, 2006

(use as many sheets as necessary)

**Application Number** Unassigned  
**Filing Date** 01/20/2006  
**First Named Inventor** Jurgen DENUL  
**Group Art Unit** Unassigned  
**Examiner Name** Unassigned  
**Attorney Docket Number** 016782-0346

Sheet 1 of 1

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	6,126,793		SUGIYAMA ET AL.	10-03-2000	
	A2	6,033,533		SUGIYAMA ET AL.	03-07-2000	
	A3	6,740,393	B1	MASSLER ET AL.	05-24-2004	
	A4	2004/0038033	A1	MASSLER ET AL.	02-26-2004	
	A5	2004/0219294	A1	MASSLER ET AL.	11-04-2004	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
	A6	DE	100 18 143	A1	BALZERS HOCHVAKUUM	10-25-2001	Abst.
	A7	FR	2 596 775	A1	UNIVERSITE DE LIMOGE	10-09-1987	Abst.

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	A8	R. F. Huang et al., "Wear-resistant multilayered diamond-like carbon coating prepared by pulse biased arc ion plating," Diamond and Related Materials, Vol. 10, No. 9-10, Sept. 2001, pages 1850-1854.	
	A9	J. Deng et al., "DLC multilayer coatings for wear protection," Diamond and Related Materials, Vol. 4, No. 7, May 15, 1995, pages 936-943.	
	A10	A. A. Voevodin et al., "Design of a Ti/TiC/DLC functionally gradient coating based on studies of structural transitions in Ti-C thin films," Thin Solid Films, Vol. 298, No. 1-2, April 20, 1997, pages 107-115.	

**Examiner  
Signature**

/Daniel Miller/

**Date  
Considered**

02/27/2008

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /DM/